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Recommender systems in e-commerce

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Proceedings of the 1st ACM conference on Electronic commerce [table of contents](#)

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↑ INDEX TERMS

Primary Classification:

K. Computing Milieux

↳ **K.4** COMPUTERS AND SOCIETY

Additional Classification:

H. Information Systems

↳ **H.1** MODELS AND PRINCIPLES

↳ **H.5** INFORMATION INTERFACES AND PRESENTATION (I.7)

↳ **H.5.2** User Interfaces (D.2.2, H.1.2, I.3.6)

↳ **Subjects:** Interaction styles (e.g., commands, menus, forms, direct manipulation)

General Terms:

Design, Human Factors, Management, Performance, Theory

Keywords:

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Relevance scale ☐ ☐ ☐ ☐ ☐**41** [Poly_{AML}: a polymorphic aspect-oriented functional programming language](#)

Daniel S. Dantas, David Walker, Geoffrey Washburn, Stephanie Weirich

 September 2005 **ACM SIGPLAN Notices , Proceedings of the tenth ACM SIGPLAN international conference on Functional programming ICFP '05**, Volume 40 Issue 9

Publisher: ACM Press

Full text available: pdf(1.01 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper defines PolyAML, a typed functional, aspect-oriented programming language. The main contribution of Poly<SMALL>AML</SMALL> is the seamless integration of polymorphism, run-time type analysis and aspect-oriented programming language features. In particular, Poly<SMALL>AML</SMALL> allows programmers to define type-safe polymorphic advice using pointcuts constructed from a collection of polymorphic join points. Poly<SMALL>AML</SMALL> also co ...

Keywords: ad-hoc polymorphism, aspects-oriented programming, functional programming, type inference, type systems

42 [Data types are values](#)

James Donahue, Alan Demers

 July 1985 **ACM Transactions on Programming Languages and Systems (TOPLAS)**, Volume 7 Issue 3

Publisher: ACM Press

Full text available: pdf(1.55 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

An important goal of programming language research is to isolate the fundamental concepts of languages, those basic ideas that allow us to understand the relationships among various language features. This paper examines one of these underlying notions, that of data type, with particular attention to the treatment of generic or polymorphic procedures and static type-checking.

43 [Type-base flow analysis: from polymorphic subtyping to CFL-reachability](#)

Jakob Rehof, Manuel Fähndrich

 January 2001 **ACM SIGPLAN Notices , Proceedings of the 28th ACM SIGPLAN-SIGACT symposium on Principles of programming languages POPL '01**, Volume 36 Issue 3

Publisher: ACM Press

Full text available: pdf(1.23 MB)

Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

We present a novel approach to scalable implementation of type-based flow analysis with

polymorphic subtyping. Using a new presentation of polymorphic subtyping with instantiation constraints, we are able to apply context-free language (CFL) reachability techniques to type-based flow analysis. We develop a CFL-based algorithm for computing flow-information in time $O(n^3)$, where n is the size of the typed program. The algorithm substantially improves upon the best previously ...

- 44 E-marketing & e-businesses: Will B2C e-commerce developed in one cultural environment be suitable for another culture: a cross-cultural study between amazon.co.uk (UK) and dangdang.com (China)



Qi-Ying Su, Carl Adams

August 2005 **Proceedings of the 7th international conference on Electronic commerce ICEC '05**

Publisher: ACM Press

Full text available: pdf(391.90 KB) Additional Information: [full citation](#), [abstract](#), [references](#)

In an era of seemingly e-everything e-commerce is changing the way people do business and impacting shopping habits. Increasingly this change has an international dimension in both trans-national transactions and exporting e-commerce business models from one culture to another. Typically this last element has involved exporting Western e-business models to the rest of the world. However, it is unclear if an e-commerce business model developed in one cultural environment would be suitable for another ...

Keywords: business-to-customer (B2C) e-commerce, cross-cultural, individualism vs. collectivism

- 45 Session 8: Characterizing customer groups for an e-commerce website



Qing Wang, Dwight J. Makaroff, H. Keith Edwards

May 2004 **Proceedings of the 5th ACM conference on Electronic commerce EC '04**

Publisher: ACM Press

Full text available: pdf(722.13 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In conventional commerce, customer groups with similar interests or behaviours can be observed. Similarly, customers in E-commerce naturally form groups. These groups allow the organization to provide quality of service (QoS) and perform capacity planning. From a system point of view, overall server performance can be improved and resources managed considering customer session behaviour. Previous studies have grouped customers using clustering techniques. Different data metrics have been selected ...

Keywords: electronic commerce, session behaviour, workload characterization

- 46 Credit risk management system on e-Commerce: case based reasoning approach



Mitsuaki Nakasumi

September 2003 **Proceedings of the 5th international conference on Electronic commerce ICEC '03**

Publisher: ACM Press

Full text available: pdf(153.10 KB) Additional Information: [full citation](#), [abstract](#), [references](#)

This paper addresses the cost imposed on the e-Commerce market when retailer and customer possess an information advantage over credit companies; in short, we examine the transaction cost on the default and the fraud. When retailers and customers differ significantly in terms of their riskiness, and credit companies cannot, or are not permitted to assess these differences, credit companies will attempt to charge all retailers and customers the same premiums for equivalent coverage; unless mechanism ...

Keywords: XBRL, case-based reasoning, credit risk, e-commerce

- 47 Unboxed objects and polymorphic typing



Xavier Leroy

February 1992

Proceedings of the 19th ACM SIGPLAN-SIGACT symposium on Principles of programming languages POPL '92**Publisher:** ACM Press

Full text available: pdf(1.22 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper presents a program transformation that allows languages with polymorphic typing (e.g. ML) to be implemented with unboxed, multi-word data representations. The transformation introduces coercions between various representations, based on a typing derivation. A prototype ML compiler utilizing this transformation demonstrates important speedups.

48 Innovative technologies of e-commerce: Application of e-commerce securitymanagement strategy in banking

Guoling Lao, Liping Wang

August 2005 **Proceedings of the 7th international conference on Electronic commerce ICEC '05****Publisher:** ACM Press

Full text available: pdf(331.36 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Today, e-commerce has achieved wide applications with its carrier network and information technology's rapid developments. But various security problems set up a lot of barriers for its further progress and the security becomes a bottleneck. Unless these problems are entirely solved, e-commerce cannot go along smoothly. According to these facts, the article tries to find a systematic security solution for the banks engaged in e-commerce. That is: security management strategy. The security strateg ...

Keywords: bank, e-commerce, risk, security management strategy**49** Polymorphic higher-order recursive path orderings

Jean-Pierre Jouannaud, Albert Rubio

March 2007 **Journal of the ACM (JACM)**, Volume 54 Issue 1**Publisher:** ACM Press

Full text available: pdf(381.33 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This article extends the termination proof techniques based on reduction orderings to a higher-order setting, by defining a family of recursive path orderings for terms of a typed lambda-calculus generated by a signature of polymorphic higher-order function symbols. These relations can be generated from two given well-founded orderings, on the function symbols and on the type constructors. The obtained orderings on terms are well founded, monotonic, stable under substitution and include β ...

Keywords: Automated termination prover tool, Gödel's polymorphic recursor, higher-order rewriting, termination orderings, typed lambda calculus**50** 3.2: IT skills: Staffing and management of e-commerce programs and projects

Fred Niederman

April 2005 **Proceedings of the 2005 ACM SIGMIS CPR conference on Computer personnel research SIGMIS CPR '05****Publisher:** ACM Press

Full text available: pdf(365.32 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Electronic commerce (e-commerce) personnel are instrumental in developing and maintaining electronic commerce programs and projects within firms. In spite of the dot-com bust, the number of firms developing and using e-commerce for interactions with customers and suppliers is growing. Personnel competence as individuals and as a group can be a decisive force in determining the level of success of e-commerce projects. This paper used in-depth interviews toward creating a better understanding of b ...

Keywords: IT governance, IT personnel, e-commerce, project management, project management metrics

51 E-commerce and computer science education



Yuzhen Ge, Jiangeng Sun

March 2000 **ACM SIGCSE Bulletin , Proceedings of the thirty-first SIGCSE technical symposium on Computer science education SIGCSE '00**, Volume 32 Issue 1

Publisher: ACM Press

Full text available: pdf(492.33 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Electronic commerce is gradually changing the way the commerce is conducted. Computer science graduates will need to be prepared for the challenge posed by the increasing demand for professionals who can develop and maintain electronic commerce systems. By examining the standard computer science curriculum, some suggestions are proposed.

52 Polymorphic splitting: an effective polyvariant flow analysis



Andrew K. Wright, Suresh Jagannathan

January 1998 **ACM Transactions on Programming Languages and Systems (TOPLAS)**, Volume 20 Issue 1

Publisher: ACM Press

Full text available: pdf(517.76 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

This article describes a general-purpose program analysis that computes global control-flow and data-flow information for higher-order, call-by-value languages. The analysis employs a novel form of polyvariance called polymorphic splitting that uses let-expressions as syntactic clues to gain precision. The information derived from the analysis is used both to eliminate run-time checks and to inline procedure. The analysis and optimizations have been applied to a suite of Scheme programs ...

Keywords: flow analysis, inlining, polyvariance, run-time checks

53 Recommender systems in e-commerce



J. Ben Schafer, Joseph Konstan, John Riedi

November 1999 **Proceedings of the 1st ACM conference on Electronic commerce EC '99**

Publisher: ACM Press

Full text available: pdf(112.96 KB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: cross-sell, customer loyalty, electronic commerce, interface, mass customization, recommender systems, up-sell

54 Dynamic generation of personalized VRML content: a general approach and its application to 3D e-commerce



Luca Chittaro, Roberto Ranon

February 2002 **Proceeding of the seventh international conference on 3D Web technology Web3D '02**

Publisher: ACM Press

Full text available: pdf(525.06 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The capability of (semi)automatically adapting the content, structure, and/or presentation of a Web site to address the interests and preferences of each individual user is more and more considered as a key factor to increase user satisfaction and building customer loyalty. However, while a large body of literature is available about making traditional

Web sites adaptive, it is surprising that no research effort has been yet devoted to the problem of adapting Web3D content and presentation. This ...

Keywords: VRML, adaptive interfaces, e-commerce, web architectures

55 Papers: AOSE II: Polymorphic self-* agents for stigmergic fault mitigation in large-scale real-time embedded systems



Derek Messie, Jae C. Oh

July 2005 **Proceedings of the fourth international joint conference on Autonomous agents and multiagent systems AAMAS '05**

Publisher: ACM Press

Full text available:  pdf(478.02 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Organization and coordination of agents within large-scale, complex, distributed environments is one of the primary challenges in the field of multi-agent systems. A lot of interest has surfaced recently around self-* (self-organizing, self-managing, self-optimizing, self-protecting) agents. This paper presents polymorphic self-* agents that evolve a core set of roles and behavior based on environmental cues. The agents adapt these roles based on the changing demands of the environment, and are ...

Keywords: SWARM, game theory, multi-agent systems, polymorphism, self-* agents, stigmergy


56 An extension of HM(X) with bounded existential and universal data-types



Vincent Simonet

August 2003 **ACM SIGPLAN Notices , Proceedings of the eighth ACM SIGPLAN international conference on Functional programming ICFP '03**, Volume 38 Issue 9

Publisher: ACM Press

Full text available:  pdf(178.16 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We propose a conservative extension of HM(X), a generic constraint-based type inference framework, with bounded existential (a.k.a. abstract) and universal (a.k.a. polymorphic) data-types. In the first part of the article, which remains abstract of the type and constraint language (i.e. the logic X), we introduce the type system, prove its safety and define a type inference algorithm which computes principal typing judgments. In the second part, we propose a realistic constraint so ...

Keywords: constraint-based type inference, existential and universal data-types, structural subtyping


57 A constraint-based approach to guarded algebraic data types



Vincent Simonet, François Pottier

January 2007 **ACM Transactions on Programming Languages and Systems (TOPLAS)**, Volume 29 Issue 1

Publisher: ACM Press

Full text available:  pdf(614.00 KB) Additional Information: [full citation](#), [appendices and supplements](#), [abstract](#), [references](#), [index terms](#)

We study HMG(X), an extension of the constraint-based type system HM(X) with deep pattern matching, polymorphic recursion, and *guarded algebraic data types*. Guarded algebraic data types subsume the concepts known in the literature as *indexed types*, *guarded recursive datatype constructors*, *(first-class) phantom types*, and *equality qualified types*, and are closely related to *inductive types*. Their characteristic property is to allow every bra ...

Keywords: GADTs, Generalized algebraic data types, constraint-based type inference